

Application No. 10/065,217
Docket No. 17MY-7239
Amendment dated July 30, 2003
Reply to Office Action of March 31, 2003

REMARKS

In the Office Action, the Examiner reviewed claims 1-20 of the above-identified US Patent Application, with the result that claims 1-10 were rejected under 35 USC §103 in view of U.S. Patent No. 4,810,467 to Wood et al. (Wood), claims 1-20 were rejected under 35 USC §103 in view of U.S. Patent No. 4,039,330 to Shaw, claims 1-10 were provisionally rejected under the judicially-created doctrine of obviousness-type double patenting in view of claims 1-10 of co-pending U.S. Patent Application Serial No. 10/065,225 to Beck et al. (Beck), and claims 1-10 were further rejected as not being patentably distinct from claims 1-10 of Beck. In response, Applicants have amended the claims as set forth above. More particularly:

Independent claims 1, 10, 11, and 20 have been amended to specify an upper limit of 3.9 weight percent for the sum of aluminum and titanium. Support for these amendments can be found in Applicants' specification at Table I, where Al+Ti contents ranging from 2.97% to 3.89% are disclosed.

Independent claims 1 and 10 have been further amended to require a minimum aluminum content of 1.6%, which is within the range of "greater than 1.5% to 2.3% aluminum" as originally recited in claims 1 and 10. Therefore, Applicants believe that the original claims support these amendments.

Dependent claims 7 and 17 have been amended to recite an aluminum+titanium content of 3.7% to 3.8% (instead of "about 3.75%"), and claim 7

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have been further amended to recite an aluminum content of 1.7% to 1.8% (instead of "about 1.75%, which the Examiner interpreted as encompassing a range even broader than 1.7% to 1.8%).

Claims 3 and 13 have been amended to correct a clerical error regarding temperature symbols.

Applicants believe that the above amendments do not present new matter. Favorable reconsideration and allowance of claims 1-20 are respectfully requested in view of the above amendments and the following remarks.

Rejections under 35 USC §103

Independent claims 1 and 10 and dependent claims 2-9 were rejected under 35 USC §103(a) as being unpatentable over Wood, and independent claims 1, 10, 11 and 20 and their dependent claims 2-9 and 12-19 were rejected under 35 USC §103(a) as being unpatentable over Shaw. Each of these rejections was on the general basis that Wood and Shaw disclose alloys whose elements have ranges that overlap Applicants' claimed ranges. Applicants respectfully traverse each of these rejections in view of the claims as amended and the following comments.

Under the first §103 rejection, the Examiner explained that Wood discloses a nickel-base alloy with maximum aluminum content of 1.5 weight percent. The Examiner stated that Applicants' claimed aluminum content of "greater than 1.5%"

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closely approximated Wood's upper aluminum level of 1.5%, and equated an aluminum content of "about 1.75%" as not being patentably distinguishable from the 1.5% level disclosed by Wood because of Applicants' use of the term "about." Citing *Titanium Metals Corporation of America v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), the Examiner concluded that at such levels "one would have expected Wood's alloys and the claimed alloys to have the same properties." As indicated above, Applicants' independent claims 1 and 10 now require an aluminum content of at least 1.6%, while dependent claim 7 now requires an aluminum content of at least 1.7%. Applicants believe that nothing in Wood suggests that Wood's alloy would be acceptable with an aluminum content of at least 1.6% (claims 1-6 and 10) or at least 1.7% (claims 7-9).

Furthermore, the court in *Titanium Metals* was concerned with "closely approximating" ranges, which were deemed obvious if one skilled in the art would have expected the compositions to have the same properties. At issue in *Titanium Metals* was a claim directed to a Ti-Ni-Mo alloy.

	Claimed	Prior Art	
	<u>Alloy</u>	<u>A</u>	<u>B</u>
Ni	0.8 %	0.75%	0.94%
Mo	0.3	0.25	0.31
Fe	to 0.1	---	---
Ti	Bal.	Bal.	Bal.

Therefore, the level for each element of the claimed alloy was between two closely-spaced levels disclosed by the prior art (and the claimed levels differed by as little as

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0.05% from the disclosed levels). As such, one skilled in the art might logically have expected the claimed alloy in *Titanium Metals* to have the same properties as the prior art alloys (or at least properties intermediate the prior art alloys). In contrast, Applicants' claimed ranges requiring a minimum of 1.6% and 1.7% aluminum are outside Wood's upper aluminum level of 1.5%, and Applicants believe that one skilled in the art would not expect Applicants' and Wood's compositions to have the same properties in view of the pivotal role that aluminum is said to play in Wood's alloy.

Finally,

The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the *prior art* suggested the desirability of the modification. (Emphasis added.)

In re Fritch, 23 USPQ2D 1780, 1783-1784 (Fed. Cir. 1992).

Consequently, the courts require that the prior art must suggest the desirability of increasing the aluminum content of Wood to something above 1.5%. However, it is only in light of Applicants' teachings that aluminum contents of at least 1.6% may appear desirable or even feasible.

For all of the above reasons, Applicants respectfully request withdrawal of the first §103 rejection of claims 1-10 based on Wood.

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Under the second §103 rejection, the Examiner explained that Shaw discloses a similar nickel-base alloy with alloying ranges that overlap those of claims 1-20. As now amended, Applicants' independent claims 1, 10, 11, and 20 require an upper limit of 3.9 weight percent for the sum of aluminum and titanium, while dependent claims 7 and 17 now require an Al+Ti content of 3.7% to 3.8%. In contrast, Shaw requires an Al+Ti content of 4% to 6.5%. Furthermore, of the numerous alloys evaluated by Shaw, none had an Al+Ti content of below 4% (see Tables 1-6). Nothing in Shaw teaches or suggests that Shaw's alloy would be acceptable with an Al+Ti content of less than 4%, much less an Al+Ti content of 3.7%-3.8%. Instead, Shaw teaches that the Al+Ti content "should be from 4 to not more than 6.5%" (column 2, lines 11-13), and emphasizes "[t]he need to maintain the amounts of . . . titanium [and] aluminum . . . within the above defined ranges" (column 4, lines 31-35). Finally, Applicants again believe that the prior art must suggest the desirability of decreasing the Al+Ti content of Shaw to Applicants' range of 3.9% and less. *In re Fritch*, supra. However, it is only in light of Applicants' teachings that an Al+Ti content of 3.9% or less may appear desirable or even feasible.

For all of the above reasons, Applicants respectfully request withdrawal of the second §103 rejection of claims 1-20 in view of Shaw.

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Rejections Based on the Co-pending Beck Application

These rejections were on the basis that Beck and claims 1-10 of Beck disclose an alloy whose elements, with the exception of titanium, overlap those recited in claims 1-10. Applicants hereby acknowledge that the present application and Beck are commonly assigned.

Applicants request that the double patenting rejection be held in abeyance until allowable subject matter has been indicated by the Examiner. If appropriate under the circumstances existing at that time, a terminal disclaimer pursuant to 37 CFR §1.321(b) will be submitted which terminally disclaims that portion of the patent issuing from the present patent application which extends beyond the termination date of Beck.

Regarding the second rejection based on Beck, the Examiner required the assignee (General Electric Company) to either "show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter." In response, the undersigned hereby affirms that, at the time of the conception of both inventions at issue, the inventors identified in both patent applications were employed by the General Electric Company and contractually bound by their employment agreement to assign their patent applications to the General Electric Company, as evidenced by the recorded Assignments to General Electric Company for both patent applications. The Assignment for the present U.S. Patent Application Serial No. 10/065,217 is recorded at Reel No. 013457 and Frame 0865. The Assignment for co-pending U.S. Patent Application Serial No. 10/065,225 is recorded at Reel No. 013451 and Frame 0302.

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Closing

In view of the above, Applicants believe that all issues outstanding from the Office Action have been addressed. It is therefore respectfully requested that this patent application be given favorable reconsideration.

Should the Examiner have any questions with respect to any matter now of record, Applicants' representative may be reached at (219) 462-4999.

Respectfully submitted,

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